INDEX TO VOL. XIX (A)

AUTHORS' INDEX

Alexander, .. *See* Taylor and Alexander.

Bhabha, H. J. .. Note on the separation of the electronic and non-electronic components of cosmic radiation, 23.

Bhagavantam, S., and Venkateswarlu, K. Scattering of light in single crystals : intensity measurements, 108.

Bhargava, P. N. and Dutt, S. Chemical examination of the roots of *centaurea Behen* Linn., 163.

Bhide, B. V. .. *See* Paranjape and others.

Chandrasekhar Aiya, S. V. Separation of electronic and non-electronic components of cosmic radiation by Bhabha's method, 177.

Dayal, Bisheshwar .. The evaluation of the specific heat of rock-salt by the new crystal dynamics, 182.

———— .. The lattice spectrum and specific heat of diamond, 224.

Deo, P. G. .. The *New light-effect* in chlorine under electrical discharge, I, 117.

Doss, K. S. Gururaja .. *See* Subrahmanya and others.

Dutt, S. .. *See* Bhargava and Dutt.

Guruswamy, S. .. *See* Prasad and others.

Hariharan, P. S. .. Intensity of X-ray reflection by diamond, 261.

Joshi, S. S. and Purushotham, A. Influence of temperature on the quenching of active nitrogen at various pressures, 159.

Kartha, A. R. S., and Menon, K. N. The oil of *Mimusops elangi* (Linn.), 1.

Krishnan, R. S. .. The Raman spectrum of diamond, 216.

———— .. Experimental evidence for the existence of the four possible structures of diamond, 298.

Krishnaswamy, B., Murty, K. Satyanarayana and Seshadri, T. R. Chemistry of gossypol, IV, 370.

Krishnaswamy, B., Rao, K. Ranganadha and Seshadri, T. R. Synthetic experiments in the benzo-pyrone series, VIII, 5.

Mani, Anna .. The fluorescence and absorption spectra of diamond in the visible region, 231.

Menon, K. N. .. Alkaloids, I, 21.

Menon, K. N. .. *See* Kartha and Menon.

Momin, A. U. .. An electrical method of studying the movement of water and salts in soils, I, 100.

Murty, G. V. L. N. and Seshadri, T. R. Raman effect and hydrogen bonds, IX, 17.

Murty, K. Satyanarayana *See* Krishnaswamy and others.

Nargund, K. S. .. *See* Paranjape and others.

Neelakantam, K. and Venkateswarlu, V. Fluorescence reactions with boric acid and *O*-hydroxy-carbonyl compounds, and their application in analytical chemistry, III, 401.

Padwal, N. A. .. *See* Prasad and others.

Pant, D. D. .. The photo-conductivity of diamond, I, II, 315, 325.

Pant, D. D. and Sakhwalkar, N. D. Fluorescence spectrum of uranyl fluoride, 135.

Paranjape, (Miss) K. D., Phalnikar, N. L., Bhide, B. V. and Nargund, K. S. Synthesis of compounds related to santonin, 381.

———— .. Synthesis of cantharidine and desoxycantharidine, 385.

Phalnikar, N. L. .. *See* Paranjape and others.

Prasad, Mata and Guruswamy, S. Study of the optical properties of gels, I, II, III, 47, 66, 77.

Prasad, Mata, Guruswamy, S. and Padwal, N. A. Opacity changes during the coagulation of sols by electrolytes, 389.

Purushotham, A. .. *See* Joshi and Purushotham.

Rajagopalan, S. .. Bacterial chemotherapy, IV, V, 343, 351.

Ramachandran, G. N. .. Diffraction coronæ due to non-spherical particles, 123.

———— .. X-ray topographs of diamond, 280.

———— .. X-ray reflection and the structure of diamond, 304.

Raman, C. V. .. The crystal symmetry and structure of diamond, 189.

———— .. The nature and origin of the luminescence of diamond, 199.

Raman, C. V. and Rendall, G. R. Birefringence patterns in diamond, 265.

Ramanathan, K. G. .. Congruence properties of Ramanujan's function $\tau(n)$, 146.

Ramaseshan, S. .. The crystal forms of the Panna diamonds, 334.

Rangaswami, S. and Rao, K. Ranganadha. — Azo dye formation in 5-hydroxycoumarins, 14.

Rao, Basrur Sanjiva .. — *See* Subrahmanya and others.

Rao, B. S. Madhava .. — Kombur Sesha Iyengar Kuppuswamy Iyengar—In memoriam, 414.

Rao, B. Sundara Rama .. — Raman effect in relation to crystal structure : sodium nitrate, 93.

Rao, K. Ranganadha .. — *See* Krishnaswamy and others.

———— .. — *See* Rangaswami and Rao.

Rao, P. Suryaprakasa .. — *See* Rao and others.

Rao, P. Ramachandra, Rao, P. Suryaprakasa and Seshadri, T. R. — Synthesis of Hibiscetin, 88.

Rendall, G. R. .. — *See* Raman and Rendall.

———— .. — Ultra-violet transparency patterns in diamond, 293.

Row, L. Ramachandra and Seshadri, T. R. — 5-hydroxy and methoxy flavylium salts, 141.

Sakhwalkar, N. D. .. — *See* Pant and Sakhwalkar.

Saksena, B. D. .. — Calculation of the elastic constants of quartz at room temperature from the Raman effect data, 357.

Sarabhai, V. .. — The method of shower anti-coincidences for measuring the meson component of cosmic radiation, 37.

Seetharaman, V. .. — On the existence of a metric for higher path-spaces, 167.

Seshachar, C. and Thiruvenkatachar, V. R. — The lunar atmospheric tide at Bangalore (1895–1904), 131.

Seshadri, T. R. .. — *See* Krishnaswamy and others.

———— .. — *See* Murty and Seshadri.

———— .. — *See* Rao and others.

———— .. — *See* Row and Seshadri.

———— .. — *See* Krishnaswamy and others.

Sigamony, A. .. — Magnetic susceptibility of diamond, 310.

———— .. — The magnetic susceptibility and anisotropy of carborundum, 377.

Subrahmanya, R. S., Doss, K. S. Gururaja and Rao, Basrur Sanjiva — Effect of electric field on Tyndall scattering, 405.

Sunanda Bai, K. .. — The ultra-violet absorption spectrum of diamond, 253.

———— .. — Luminescence patterns in diamond, 274.

Taylor, H. J. and Alexander, J.		The measurement of surface tension by means of sessile drops, 149.
Thiruvenkatachar, V. R.		*See* Seshachar and Thiruvenkatachar.
Venkateswarlu, K.	..	*See* Bhagavantam and Venkateswarlu.
————	..	Effect of temperature on the intensities of Raman lines, III, 111.
Venkateswarlu, V.	..	*See* Neelakantam and Venkateswarlu.

TITLE INDEX

Alkaloids, I (Menon), 21.

Azo dye formation in 5-hydroxycoumarins (Rangaswami and Rao), 14.

Bacterial chemotherapy, IV, V (Rajagopalan), 343, 351.

Benzo-pyrone series, synthetic experiments, VIII (Krishnaswamy and others), 5.

Cantharidine and desoxycantharidine, synthesis (Miss Paranjape and others), 385.

Carborundum, the magnetic susceptibility and anisotropy (Sigamony), 377.

Centaurea Behen Linn, roots, chemical examination (Bhargava and Dutt), 163.

Coagulation of sols by electrolytes, opacity changes (Prasad and others), 389.

Cosmic radiation, electronic and non-electronic components, note on the separation (Bhabha), 23.

Cosmic radiation, separation of electronic and non-electronic components by Bhabha's method (Chandrasekhar Aiya), 177.

Cosmic radiation, the meson component, the method of shower anti-coincidences for measuring (Sarabhai), 37.

Diamond, birefringence patterns (Raman and Rendall), 265.

Diamond, crystal symmetry and structure (Raman), 189.

Diamond, experimental evidence for the existence of the four possible structures (Krishnan), 298.

Diamond, intensity of X-ray reflection (Hariharan), 261.

Diamond, magnetic susceptibility (Sigamony), 310.

Diamonds, Panna, the crystal forms (Ramaseshan), 334.

Diamond, luminescence patterns (Sunanda Bai), 274.

Diamond, the fluorescence and absorption spectra, in the visible region (Mani), 231.

Diamond, the lattice spectrum and specific heat (Dayal), 224.

Diamond, the nature and origin of the luminescence (Raman), 199.

Diamond, the photoconductivity, I, II (Pant), 315, 325.

Diamond, the Raman spectrum (Krishnan), 216.

Diamond, the ultra-violet absorption spectrum (Sunanda Bai), 253.

Diamond, ultra-violet transparency patterns (Rendall), 293.

Diamond, X-ray topographs (Ramachandran), 280.

Diamond, X-ray reflection and the structure (Ramachandran), 304.

Diffraction coronæ due to non-spherical particles (Ramachandran), 123.

Flavylium salts, 5-hydroxy and methoxy (Row and Seshadri), 141.

Fluorescence reactions with boric acid and *O*-hydroxy-carbonyl compounds, and their application in analytical chemistry, III (Neelakantam and Venkateswarlu), 401.

Fluorescence spectrum of uranyl fluoride (Pant and Sakhwalkar), 135.

Gels, study of the optical properties, I, II, III (Prasad and Guruswamy), 47, 66, 77.

Gossypol, chemistry, IV (Krishnaswamy and others), 370.

Hibiscetin, synthesis (Rao and others), 88.

Iyengar, Kombur Sesha Iyengar Kuppuswamy—In memoriam I (Rao), 414.

Light-effect, new, in chlorine under electrical discharge, I (Deo), 117.

Light, scattering, in single crystals : intensity measurements (Bhagavantam and Venkateswarlu), 108.

Lunar atmospheric tide at Bangalore (1895–1904) (Seshachar and Thiruvenkatachar), 131.

Mimusops elangi (Linn), oil (Kartha and Menon), 1.

Nitrogen, active, quenching, at various pressures, influence of temperature (Joshi and Purushotham), 159.

Path-spaces, higher, on the existence of a metric (Seetharaman), 167.

Quartz, elastic constants, calculation, at room temperature from the Raman effect data (Saksena), 357.

Raman effect and hydrogen bonds, IX (Murty and Seshadri), 17.

Raman effect in relation to crystal structure : sodium nitrate (Rao), 93.

Raman lines, intensities, effect of temperature, III (Venkateswarlu), 111.

Ramanujan's function $\tau(n)$, congruence properties (Ramanathan), 146.

Santonin, compounds related, synthesis (Miss Paranjape and others), 381.

Soil, movement of water and salts, an electrical method of studying (Momin), 100.

Specific heat of rock-salt, evaluation of, by the new crystal dynamics (Dayal), 182.

Surface tension, measurement, by means of sessile drops (Taylor and Alexander), 149.

Tyndall scattering, effect of electric field (Subrahmanya and others), 405.